Research Article

Perception of Clinical Dietitians in Conducting Research: A Qualitative Study

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ABSTRACT

Background and purpose: Clinical research is foundational to evidence-based practice, enhancing healthcare quality and improving patient outcomes. While research is considered a core professional competency for dietitians, participation rates remain low. This study aims to explore the perceptions of clinical dietitians in Malaysian government settings regarding their involvement in research. Method: A descriptive qualitative study was conducted using virtual Focus Group Discussions (FGDs). Twenty-two clinical dietitians from various Malaysian Ministry of Health settings (hospitals, health clinics) were recruited via purposive sampling. A semi-structured interview guide explored three domains: factors influencing research, challenges, and expectations. FGDs were audio-recorded, transcribed verbatim and analysed using reflexive thematic analysis. Trustworthiness was ensured through analyst triangulation, reflexive notes, and an audit trail. Results: Thematic analysis revealed three overarching themes: (1) Facilitating Factors in Conducting Research, including intrinsic motivators (e.g., passion, professional growth) and practice-based drivers (e.g., improving patient outcomes); (2) Barriers: Systemic and Individual Hurdles (e.g., lack of time, funding); and (3) Expectations for a Research-Supportive Ecosystem, highlighting the need for structured mentorship, protected research time, and formal professional recognition. Discussion & conclusion: Clinical dietitians in Malaysia are motivated to conduct research, primarily by a desire to improve patient care. However, significant barriers related to time, resources, and a lack of a formal research structure impedes their involvement. The findings underscore the need for systemic support from institutions, professional bodies (like the Malaysian Dietitians' Association), and the Head of Profession to build research capacity. This includes developing structured training, creating mentorship pathways, and integrating research activities into key performance indicators and career advancement frameworks.

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1. Introduction

Clinical research is a cornerstone of modern healthcare, providing the necessary evidence to advance medical treatments, optimise patient management, and enhance the overall quality of care (Hickson *et al.*, 2024). For allied health professions, including dietetics, research is described as the 'backbone' of the profession, forming the basis of evidence-based guidelines and demonstrating the unique value of nutritional interventions (Pickstone *et al.*, 2008). Healthcare professionals' engagement in research is crucial for translating scientific findings into practice, thereby optimising healthcare efficacy and quality (Nagy *et al.,* 2010).

Ideally, clinical dietitians are uniquely positioned to identify practice-based questions and conduct patient-centred research. This expectation is often embedded in undergraduate training, where students are taught to appraise and conduct research (Whelan *et al.*, 2022). However, evidence suggests this research-active dynamic is challenging to maintain once dietitians enter clinical practice (Hand *et al.*, 2020). Low research participation among practicing dietitians is a well-documented global issue, often attributed to barriers such as lack of time, funding, inadequate training, and limited institutional support (Dougherty *et al.*, 2015; Boyd *et al.*, 2019; Wedemire *et al.*, 2023). In Malaysia, this gap is evident. The Ministry of Health (MOH) has actively encouraged research among clinical professionals. A Dietitian Quality Research Board (DQRB) was established in 2020 to build research capacity among government-setting dietitians. Despite these efforts, data from the DQRB database (2016-2021) indicate that the percentage of dietitians actively conducting research remains low, at approximately 9%. This low engagement highlights a significant gap between the profession's evidence-based ideals and the realities of clinical practice.

While international studies have identified common themes, there is a scarcity of qualitative data exploring these perceptions specifically within the Malaysian context. Understanding the unique motivators, barriers, and expectations of Malaysian dietitians is essential for developing targeted and effective strategies. Therefore, the objective of this study was to qualitatively explore the perceptions of clinical dietitians in Malaysian government settings regarding research, focusing on the factors that influence their involvement, the barriers they face, and their expectations for future support.

2. Materials and Methods

2.1 Study Design

A descriptive qualitative study design was employed to gain an in-depth understanding of the Respondents' perceptions. Data were collected through Focus Group Discussions (FGDs), a method well-suited for exploring shared experiences and group norms. The study was underpinned by a constructivist paradigm, which acknowledges that Respondents' perceptions are socially constructed realities influenced by their professional and organisational context.

2.2 Study Setting and Respondents

The study was conducted within Malaysian Ministry of Health (MOH) facilities, including tertiary hospitals, state hospitals, district hospitals, and health clinics across various states. Respondents were clinical dietitians employed by the MOH.

Inclusion criteria were: (1) Registered dietitian with the Malaysian Dietitians' Association (MDA) or eligible for registration, (2) Currently practicing in an MOH government setting, (3) Minimum of one year of clinical experience, and (4) Able to communicate in English or Bahasa Malaysia. Exclusion criteria were: (1) Dietitians in private practice, (2) Dietitians in non-clinical management or academic roles, and (3) Student dietitians or interns.

2.3 Recruitment and Sampling

Respondents were recruited using purposive sampling to ensure a diverse sample in terms of years of service, range of research experience (from none to experienced), and practice setting (e.g., hospital, health clinic). An invitation poster with study details was disseminated through the official Head of Dietetics (Ketua Profession) network and state-level dietitian communication channels. Interested dietitians who contacted the research team were provided with a Participant Information Sheet, and given written informed consent before the FGD. A total of 22 clinical dietitians participated. Respondents held designations ranging from Grade U41 (entry-level) to U54 (senior dietitian/head of unit), representing a mix of clinical and leadership roles.

2.4 Study Tool

A semi-structured interview guide was developed based on a review of literature on research barriers and facilitators among allied health professionals (Dougherty *et al.*, 2015; Boyd *et al.*, 2019). The guide was pilot-tested with two clinical dietitians (not included in the final sample) for clarity and flow. The guide covered three main domains, with questions:

Perceptions and Influencing Factors: 'What are your thoughts on dietitians conducting research?', 'What factors might motivate you to get involved in a research project?'

Challenges and Barriers: 'What challenges have you faced, or do you anticipate, when trying to conduct research?', 'Can you tell me more about how your daily work impacts your ability to do research?'

Needs and Future Support: 'What kind of support would be most helpful for you to conduct research?', 'What do you think needs to happen to make it easier for dietitians to do research?'

For grouping purposes, 'research experience' was defined as having been actively involved (as principal or co-investigator) in at least one research project resulting in a presentation or publication within the last five years. Those who had not were grouped as 'limited/no research experience.' This was done to create a safe space for less-experienced dietitians to speak freely.

2.5 Data Collection

Data were collected between August 2022 and February 2024 through 10 FGDs (4-6 Respondents each). Sessions were conducted by trained moderators (CYH and BSMHL) with experience in qualitative methods and a note-taker (NMK or WHA). The moderator was not the direct supervisor of any participant. Sessions were held virtually (via Google Meet), based on participant preference. Each FGD lasted 60–90 minutes, was audio-recorded with consent, and professionally transcribed verbatim. Recruitment continued until thematic saturation was reached, defined as the point where no new significant themes emerged from subsequent FGDs.

2.6 Data Analysis

Data were analysed using reflexive thematic analysis following the six-step guide by Braun and Clarke (2019). Familiarisation involved two researchers (CYH, BSMHL) read and re-read the transcripts and listened to audio recordings. Then followed by coding, the researchers independently generated initial codes for the first three transcripts. During generating themes, the researchers met to compare codes, resolve discrepancies, and develop an initial thematic framework, which was applied to the remaining transcripts. Themes were reviewed and refined, ensuring they were distinct and coherently represented the data. Then themes and sub-themes were finalised, defined, and named. After that, the analysis was written up, supported by illustrative quotes. NVivo software (Version 12) was used to manage and organise the qualitative data.

2.7 Trustworthiness

The rigor of the study was ensured using Guba & Lincoln's criteria for trustworthiness. Credibility (confidence in the truth of the findings) was enhanced through: (1) Analyst triangulation, as two researchers (CYH, BSMHL) independently coded initial transcripts and met to discuss and refine the codebook; and (2) Member checking, where a summary of themes was shared with two Respondents to ensure the findings resonated with their experiences. Dependability (showing the findings are consistent and could be repeated) was established via an audit trail consisting of verbatim transcripts, audio recordings, and reflexive notes kept by the moderator, and coding documents. Confirmability (the degree to which findings are shaped by Respondents and not researcher bias) was addressed through reflexivity. The primary researcher (a clinical dietitian) kept notes on personal assumptions throughout the process. Transferability (showing the findings have applicability in other contexts) is supported by thick description of the Respondents, setting, and findings, allowing readers to assess potential transferability.

2.8 Ethics Approval

The study was reviewed and granted approval by the Medical Research Ethics Committee (MREC) Malaysia with identity number NMRR ID-22-00897-HPU.

3. Results

Saturation in the study was observed after recruiting 22 respondents (10 FGDs). The age of the consenting respondents ranged from 30 to 54 years, and the median years of service was 9 years (ranging from 3 to 29 years). Nineteen respondents were female and three were male, with eleven identifying as Malays and nine as Chinese. Nineteen respondents held a bachelor's degree, two held a master's degree, and one held a PhD (Table 1).

Table 1. The Sociodemographic Characteristics of Respondents

Code	Age (years)	Years of service	Gender	Ethnicity	Education level	Setting
R1	33	8	Female	Chinese	Degree	Institute
R2	36	10	Female	Malay	Master	Institute
R3	37	12	Female	Chinese	Degree	Hospital
R4	36	12	Female	Chinese	Degree	Hospital
R5	30	7	Female	Malay	Degree	Hospital
R6	32	8	Female	Chinese	Degree	Hospital
R7	54	29	Female	Malay	Degree	Hospital
R8	33	7	Female	Malay	Degree	Hospital
R9	39	12	Female	Malay	Degree	Hospital
R10	44	21	Female	Malay	Degree	Hospital
R11	33	4	Male	Malay	Degree	Sport School
R12	32	6	Female	Chinese	Degree	Hospital
R13	33	8	Female	Chinese	Degree	Hospital
R14	33	7	Female	Chinese	Degree	Hospital
R15	31	6	Female	Malay	Degree	Hospital
R16	28	3	Female	Malay	Degree	Hospital
R17	35	12	Female	Malay	Degree	Hospital
R18	30	4	Female	Chinese	Degree	Hospital
R19	39	17	Female	Malay	Degree	Hospital
R20	39	16	Female	Malay	Master	Hospital
R21	40	17	Male	Chinese	PhD	Health Clinic
R22	36	10	Male	Malay	Degree	Health Clinic

Clinical dietitians recognise the importance of conducting research in the field of dietetics. Like other healthcare professionals, they are influenced by various factors when engaging in research. These factors collectively shape the focus and direction of a clinical dietitian's research efforts, aiming to contribute meaningfully to the field of nutrition and improve patient care and outcomes. Thematic analysis identified three overarching themes: (1) Facilitating Factors in Conducting Research, (2) Barriers: Systemic and Individual Hurdles, and (3) Expectations for a Research-Supportive Ecosystem.

3.1 Facilitating factors in conducting research

This theme captures the factors that motivate and drive dietitians to engage in research. These were grouped into intrinsic motivators, extrinsic motivators, and practice-based drivers. Respondents expressed a deep personal and professional drive as a key facilitator. This included a personal passion for inquiry, a desire for self-learning, and the view that research is essential for the profession's growth and their own career development.

3.1.1 Patient Needs and Health Trends

Respondents indicated that conducting research on current health issues or developing trends in nutrition-related disorders can address immediate patient needs and advance healthcare, enabling them to offer tailored recommendations that improve patient outcomes.

'Study you may know more about the patients that you are treating so it will help up in your practice.' [R1, 33 years old]

'In sport school, coaches demand on the data on their athlete regarding on the nutrition part because they could plan the training based on it and how to improve their performance' [R11, 33 years old]

3.1.2 Evidence-Based Practice

A strong motivator was the desire to improve patient care. Respondents saw research as a tool to address immediate patient needs, understand health trends, and gather solid evidence for their interventions, reinforcing their commitment to Evidence-Based Practice. Respondents noted that dietitians are strongly influenced by evidence-based practice. Conducting research allows them to gather solid evidence to support their dietary interventions and recommendations. They rely on scientific literature and studies to guide their clinical decisions.

'Our medical nutrition therapy is evidenced based practice. We did search and gather information and suggestions from previous studies before implementing intervention.' [R20, 39 years old]

3.1.3 Professional Development

Respondents expressed a deep personal and professional drive as a key facilitator. This included a personal passion for inquiry, a desire for self-learning, and the view that research is essential for the profession's growth and their own career development. Respondents stated that conducting research contributes to a dietitian's professional development.

It enables them to stay updated with the latest research methods, technologies, and best practices in nutritional science.

'Conducting research is needed to let profession grows. And it's about ahh self-learning.' [R7, 54 years old]

'By conducting research, dietitian profession can grow... Self-development... Career development...' [R10, 44 years old]

3.1.4 Advancement of Knowledge

Respondents revealed that dietitians are motivated by an eagerness to learn.

'I think it will be beneficial to conduct a research... emm.. Something like new intervention or new way of practice... yea... so I think it will be beneficial.' [R2, 38 years old]

'We need to have more research, especially in Dietetic Field because we need to know more on the latest

evidence in nutrition management' [R6, 32 years old]
'By the knowledge and information that we get from the research, we can improve our clinical care and more quality. It's quite meaningful if we do study.' [R13, 33 years old]

3.1.5 Superior Support and A Supportive Team

Support from supervisors and a collaborative team culture were repeatedly mentioned as critical. Respondents stated that support from supervisors and team members can play crucial roles in motivating researchers.
'I'm very fortunate because my team is very open and ready to discuss. we brainstorm, conduct the research and collect date together' [R1, 33 years old]
'If boss/superior fully support our research activities... She/he gives encouragement, motivation and acknowledgement. Yes, more dietitians might start to conduct research.' [R19, 39 years old]
'Research will be completed especially there's a great team support. The culture of research is importance.' [R20, 39 years old]
'As head of department, I tried to set target, gave motivation and encouragement as well as approach the related experienced dietitian to guide my dietitians. Last, they did achieve something in the conference. This achievement really motivated us over there. [R10, 44 years old]

3.1.6 Funding Opportunities

Respondents mentioned that research often requires funding. Available grants, funding possibilities, or institutional support may influence dietitians' decisions about research topics or projects.
'Conducting research required budget and grant. It might be one of the factors which influence dietitian to conduct research.' [R3, 37 years old]
'If there's sponsor or funding for us, I will conduct research. that's main barriers for me in conducting research.' [R21, 40 years old]

3.1.7 Key Performance Indicator Influence

Additionally, institutional mandates, such as research being a Key Performance Indicator (KPI), served as a positive motivator. Respondents indicated that changes in key performance indicators related to nutrition research may influence research objectives. Dietitians may dedicate time to conducting research to align with these key performance indicators, ensuring that their contributions are recognised and appreciated.
'Hospital director has set that every profession/department must do research. So, I take it positively as motivator to initiate conducting research.' [R5, 30 years old]
'I think we need to revise our KPI so that we are motivated to conduct research and been granted with the effort in conducting research.' [R9, 39 years old]

3.1.8 Professional Interests and Passion

According to respondents, personal interests and passions can significantly impact research directions. Some dietitians may be drawn to specific aspects of nutrition or health that align with their personal experiences or goals.
'Conducting research is needed but... only for those really passionate...' [R7. 54 years old]
'For me, the personal interest and passionate are the main key-point to involve in conducting research.' [R9, 39 years old]
'it will be a burden if the people is not interested in conducting research...' [R9, 39 years old]
'we discussed with other dietitian in the same state to do some research but there're lack of support; not many dietitians interested to do. So, we stop there.' [R21, 40 years old; R22, 36 years old]

3.1.9 Clinical Experience

Respondents pointed out that clinical experience can also influence research. Dietitians may observe patterns, gaps, or barriers during interactions with patients, prompting investigations into these areas of concern.
'We identify the nutrition problem, then we need research to improve our clinical judgement and

intervention... we are as important in-patient care' [R3, 37 years old]

3.2 Barriers: Systemic and Individual Hurdles

On the other hand, respondents also faced several barriers or barriers when conducting research. This theme details the significant challenges Respondents identified that hinder their ability to conduct research. Some of these barriers include:

3.2.1 Time Constraints and Limited Resources

This was the most frequently and strongly cited barrier. Respondents felt overwhelmed by heavy clinical workloads, administrative duties, and promotional activities, leaving no dedicated time for research. This was compounded by a lack of manpower and limited access to funding. Respondents reported that clinical dietitians often have demanding schedules that include patient care, administrative duties, and continuous training. Finding dedicated time for research amid these various obligations can be challenging. As stated by respondents, research requires resources such as financing, access to specialised equipment, and support staff. A lack of proper resources, particularly in smaller healthcare settings or facilities, may hinder research efforts.

'The challenging part is because I'm also working at the same time... so ahh.…so it's a challenge for my time' [R2, 38 years old]

'there's limited time to conduct research during working hours. past 2 years, I tried to collect my data during my lunch time and after working hours... very exhausted...' [R3, 37 years old]

'I think need more manpower to conduct the research. Because we need to do our clinical work and a lot of activity like nutrition month, dietitian day, health promotion activity, and also our clinics. We have no time to do research.' [R14, 33 years old]

'Research is very challenging… (laugh)... no support... doing research alone is very challenging…' [R1, 33 years old]

'We tried to conduct research but discontinued because of we lack of budget and manpower...' [R4, 36 years old]

'We need guidance and mentoring in the research process. We need to make appointment and waiting for a long queue to seek for expert guidance from research centre.' [R12, 32 years old]

'we are aware that there are research training workshop or course. But the seats are limited. Not everyone who interested in research able to join...' [R18, 30 years old]

3.2.2 Ethical Considerations

Respondents stated that conducting research with human Respondents necessitates strict adherence to ethical standards. Navigating these requirements, obtaining informed consent, and ensuring participant safety can be complicated and time-consuming.

'The process of ethical approval is very tedious. There're lots of documents that we need to prepare and submit. After submission, there are revisions. Few times of revisions. Then the process is time-consuming.' [R14, 33 years old]

3.2.3 Data Collection and Analysis

Many Respondents expressed a lack of confidence in their research skills. They felt their undergraduate training was insufficient in practical research methodology, statistical analysis, and scientific writing, making the prospect of conducting research intimidating. Respondents admitted that gathering accurate data and conducting thorough analyses can be challenging. Dietitians may lack expertise in specific research methods or statistical analyses, necessitating collaboration with other specialists.

'We had a study was stopped prematurely because we unable to recruit the adequate number of subjects...' [R7, 54 years old]

3.2.4 Publication and Dissemination

Respondents commented that publishing research findings in peer-reviewed publications and distributing

them to the larger community is critical to impact. However, getting research accepted for publication while effectively presenting its findings can be tough.
After conducting research, publication is the way to communicate our findings with others. [R15, 31 years old]

3.2.5 Competing Priorities

Respondents claimed that the immediate needs of patients often take precedence over initiatives for research. Clinical dietitians may encounter substantial barriers in balancing these multiple needs.
'it is very challenging if we have to conduct research which is time-consuming while we need to priority our patient-care (in-patients, out-patients and public talk) during working hours.' [R8, 33 years old]
'Everybody has their interest; not everyone interests in research; at least not me. I interest in other quality project' [R18, 30 years old]

3.2.6 Interdisciplinary Collaboration

Respondents stated that collaborating with professionals from various fields can be enriching but challenging because of differences in terminology, methodology, and approaches. Effective multidisciplinary communication is essential but challenging to achieve.
'In past experience, it's difficult and challenging to involve multi discipline in the study. The perspectives and focus are difference.' [R7, 54 years old]

3.2.7 Research Skill Development

Respondents indicated that research skills may not be the primary focus of dietitians' education and training. They also stated that they lack skills in relation to research. As a result, some dietitians may experience a learning curve when performing independent research.
'We had been trained as clinical dietitian more; we lack of research skill training like study design and writing... I really have no much idea on research... It's a burden for me' [R5, 37 years old]
'I have no idea on the research methodology or even statistics... The knowledge during undergraduate was too surface for me to conduct research... [R4, 36 years old]
But, that's another challenging task... Other than proposal... ya, you know… scientific writing is difficult... [R15, 31 years old]

Overcoming these barriers often requires a multidisciplinary approach, support from institutions, continuous education, networking, and sometimes innovation.

3.3 Expectations for a Research-Supportive Ecosystem

This theme outlines the specific types of support Respondents believe are necessary to foster a positive research culture and overcome the identified barriers.

3.3.1 Expectation of Guidance from Experience Researchers/Clinical Research Committee

Respondents noted that research can be challenging, and junior researchers may experience periods of uncertainty. The supervision of an experienced researcher is crucial for fostering the growth and development of junior researchers. It not only shortens the learning curve but also enhances the overall quality and success of research projects. Mentorship is essential for cultivating the next generation of researchers and maintaining quality in research methods. There was a strong, unanimous call for structured guidance. Respondents, especially those with limited experience, felt a formal mentorship system was essential. They desired an experienced researcher to guide them through the process, from proposal writing to publication.
'Maybe if there are other people who has experience in doing research before, can give us some guidance, comments and suggestions, then we may be able to make it easier to initiate a research and collect the data. Yeah. So, we do need the support.' [R5, 30 years old]

'I expect proper coaching from those who experienced in research, like maybe starting from A, like how to write research, maybe I prefer if there is a mentor that we can refer to, like mentorship system. Because guidance is very important for us, especially for those that never start any research before.' [R16, 28 years old]

3.3.2 Expectation of Protected Time to Conduct Research

Respondents explicitly stated the need for "protected time" – dedicated, scheduled time for research activities, formally recognised as part of their job scope. However, some also noted the challenge this would create for colleagues who would have to cover their clinical duties. Respondents revealed that the expectation of having protected time is essential for conducting research.

'We can try to schedule a time for us to do research related activity; during that period (maybe 3-4 hours), we just focus on the research like writing proposal or data collection' [R10, 44 years old]

'The protected time is needed. I do research then I have protected time, but then the burden actually goes to my colleagues who cover me like how I cover others as well. It is actually like added burden to our routine' [R17, 35 years old]

3.3.3 Expectation of Professional Recognition

Respondents felt that for research to be sustainable, it must be formally valued. They expected professional recognition for their efforts and, crucially, for research achievements to be integrated into career advancement and promotion pathways.

'Reward or recognition from profession is importance to motivate us to conduct research...' [R9, 39 years old]

'There's very exhausted and demotivated to conduct research if no appreciation on the research outcomes or acknowledgement from superior or profession' [R4, 36 years old]

3.3.4 Expectation of Career Advancement

Respondents indicated that successful research outcomes can significantly contribute to professional development. The expectation that these outcomes will lead to career advancement, promotions, or increased opportunities can be a motivating factor.

'I will conduct research if there's promotion or career development after certain research achievement. If there's no difference between them, why do I need to do?' [R9, 39 years old]

'If I can get promoted if I do research. Yes, I definitely will try to conduct more research.' [R15, 31 years old]

4. Discussion

This qualitative study provides an in-depth exploration of the perceptions of clinical dietitians in Malaysian government settings towards research. The findings were grouped into three themes: facilitating factors, barriers, and expectations. Our discussion is structured around these themes.

4.1 Facilitating Factors: The Drive to Improve

Our study found that Respondents were intrinsically motivated by a desire for professional development and a passion for advancing knowledge, which aligns with other studies on allied health professionals (Wedemire *et al.*, 2023). The primary driver, however, was the desire to improve patient outcomes and ground their work in evidence. This finding reinforces those dietitians are practice-driven, seeing research not as an abstract exercise but as a tool to enhance their clinical efficacy (Dougherty *et al.*, 2015).

Beyond patient care, research contributes significantly to professional development. Engaging in research allows dietitians to stay current with the latest methods, technologies, and best practices in nutritional science (Andersen *et al.*, 2018). Publishing findings also boosts a dietitian's credibility and reputation, positioning them as experts and leaders in their field. Many are motivated by an intrinsic desire to learn, using research to deepen their understanding of nutrition, discover new insights, and contribute

to the broader body of knowledge. This genuine interest helps them overcome resource constraints and fosters a strong commitment to their research projects (Wedemire *et al*., 2023). However, it is important to note that heavy workloads often limit research opportunities, as day-to-day duties can overshadow these efforts and contribute to burnout (Todorovic *et al*., 1989). Institutions can help by providing resources, time, and integrated training programs to foster a culture that values research (Hickson *et al*., 2024).

Extrinsic factors, such as supportive supervisors and institutional KPIs, were also key facilitators. A positive and encouraging environment, where leadership actively supports research, can significantly boost confidence and engagement (Boyd *et al*., 2019). This highlights the pivotal role of local leadership in fostering a research culture. Changes in key performance indicators (KPIs) can also motivate research efforts. When KPIs are focused on improving patient outcomes, they align dietitians' work with organisational priorities and increase the visibility of their contributions. One respondent [R5, 30 years old] was motivated to start a research project after his Hospital Director mandated that every department must conduct research. Additionally, a dietitian's own clinical experience often highlights recurring issues and care gaps, which can drive them to seek solutions through research.

4.2 Barriers: Systemic and Individual Hurdles

The barriers identified in our study are consistent with the international literature (Hand *et al*., 2020; Dougherty *et al*., 2015). The "lack of time" due to heavy clinical loads was the most significant barrier, a structural challenge that often leaves research as an "add-on" rather than an integrated component of the job (Rusali *et al*., 2020).

Beyond time, Respondents identified systemic hurdles like the "tedious" ethics approval process and a lack of skills in research methodology and scientific writing. This "research skills gap" suggests that while undergraduate programs introduce research, they may not sufficiently equip dietitians with the practical skills and confidence needed for independent practice-based research (Whelan *et al*., 2022). These points are needed for continuous professional development in research methods. Another prominent challenge is the complexity of dietary data collection and analysis. Gathering comprehensive dietary data is resource-intensive and costly (Avraham *et al*., 2024), and unlike pharmaceutical trials, dietary clinical trials lack standardised designs (Mirmiran *et al*., 2021). Data collection is often nuanced and poorly defined, complicating efforts to integrate findings into patient care (Clark *et al*., 2022). The diversity of tools and training requirements further complicates these efforts, underscoring the need for standardised education on data collection at the undergraduate level (Mutsekwa *et al*., 2024).

Scientific writing and publication also pose a significant challenge. As noted by one respondent [R15, 31 years old], getting research accepted for publication while effectively presenting its findings can be difficult. Translating complex data into clear, concise manuscripts requires significant effort, and inadequate incentives or training often hinder researchers from sharing their findings (Landry *et al.,* 2024; Iskander *et al.,* 2018). Barriers such as navigating journal submissions and managing reviewer feedback further complicate the process (Elgamri *et al*., 2023; Weaver *et al*., 2017). Mentorship and training are essential to overcoming these barriers and sustaining research involvement (Boyd *et al*., 2019).

Competing clinical priorities and heavy workloads are a primary barrier to research participation. A survey revealed that only 34.3% of dietitians with research training had engaged in research activities in the previous six months, citing competing work roles as the main obstacle (Hand *et al*., 2020). This structural challenge, also mentioned by respondent [R8, 33 years old], often overshadows research efforts (Rusali *et al*., 2020; Dougherty *et al*., 2015). However, a supportive organisational environment can facilitate research integration, leading to greater involvement in higher-level research activities (Boyd *et al*., 2019).

Multidisciplinary collaboration also presents difficulties. As one respondent [R7, 54 years old] explained, "the perspectives and focus are difference," which can hinder effective teamwork. While collaborative teams can produce more innovative outcomes (Slade *et al*., 2023), they require more time, resources, and effective communication (Tigges *et al*., 2019). Divergent goals, such as clinical outcomes versus behavioural changes, further complicate alignment. Finally, the lack of research training is a significant challenge, as dietetics education primarily focuses on clinical practice over research

methodology. A survey of Academy of Nutrition and Dietetics members found that 45.3% cited inadequate training as a barrier (Dougherty *et al*., 2015). This gap leaves dietitians unprepared for tasks like research design and ethical reviews, although engaging in projects can help build these skills over time (Whelan *et al*., 2022).

4.3 Expectations for a Research-Supportive Ecosystem

Respondents' expectations outline a clear roadmap for building research capacity. The calls for mentorship and protected time are well-documented needs for building research capacity in healthcare settings (Adeniran*et al*., 2012; Deng *et al*., 2024). These represent tangible, structural supports those institutions can provide. Respondents framed these not as initial motivators (like 'passion') but as necessary components to justify the significant extra-role effort research requires. They perceived a disconnect where research, while encouraged, was not formally valued within their performance evaluations (*Lembaga Penilaian Prestasi*) or career progression. This finding suggests that for research to be sustainable, it must be embedded into the professional structure, moving from a "passion project" to a recognised and rewarded professional activity. This aligns with calls for creating formal "clinical-researcher" career pathways for allied health professionals (Hickson *et al*., 2024).

4.4 Strengths and Limitations

A key strength of this study is its in-depth qualitative exploration of perceptions from dietitians across diverse government settings in Malaysia, providing rich, contextual data. The use of rigorous qualitative methods, including analyst triangulation and an audit trail, enhances the trustworthiness of the findings. Limitations include the use of purposive sampling, which may not capture the views of all dietitians. Furthermore, as Respondents were self-selected, they may represent those with stronger opinions (either for or against) research. The findings are specific to the Malaysian government healthcare setting and may not be generalisable to dietitians in private practice or other countries.

4.5 Implications

The findings have significant implications for practice and policy. These results can inform the development of accessible, sequential research training (from proposal writing to statistics), establish a formal mentorship program, and advocate for research grant opportunities. For the Head of Dietetics Profession (Ketua Profession) (MOH), this study provides crucial feedback on the need to advocate for structural changes. This includes formally integrating research activities into Key Performance Indicators (KPIs) and exploring viable models for protected research time. For Hospital and Health Clinic Administrators, this study highlights the importance of fostering a supportive local research culture through leadership encouragement and allocating resources, however small, to support dietitian-led projects.

5. Conclusion

This qualitative study demonstrates that clinical dietitians in Malaysia’s government healthcare system are motivated to engage in research, primarily to enhance patient care through evidence-based practice. However, their engagement is constrained by time limitations, inadequate institutional support, and low confidence in research skills. Addressing these systemic barriers through targeted training, mentorship, and organisational support could strengthen research capacity and foster a stronger evidence-based culture within clinical dietetics.

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